

1. (Currently Amended) A method of storing data, from a markup document containing a plurality of elements and a plurality of attributes, in a relational database, said method comprising:

storing an element record for every element of said plurality of elements in an element table of said relational database so that said relational database includes a plurality of element records, wherein each element record includes a unique element ID, and an element data set; and

storing an attribute record for every attribute of said plurality of attributes in an attribute table of said relational database so that said relational database includes a plurality of attribute records, wherein said attribute record comprises an attribute data set for one attribute and an element ID of an element to which the one attribute is assigned wherein a new markup document having a same content as said markup document can be constructed using said plurality of element records and said plurality of attribute records stored in said relational database.

2. (Original) The method of Claim 1 wherein said element data set includes character data.

3. (Original) The method of Claim 1 wherein said element data set contains a parent element ID.

4. (Original) The method of Claim 2 wherein said element data set contains a parent element ID.

5. (Original) The method of Claims 1 wherein said element data set includes an element name.

6. (Original) The method Claim 1 further comprising:

storing, for every unique element name of the plurality of elements, an element name record including an element name and a corresponding unique element name ID in an element name table of said relational database.

7. (Original) The method of Claim 1 comprising:
storing, for every unique attribute name of the plurality of attributes, an attribute name record including an attribute name and a corresponding unique attribute name ID in an attribute name table of said relational database.

8. (Original) The method of Claim 1 wherein said attribute data set includes an attribute name.

9. (Original) The method of Claim 1 wherein said attribute data set includes an attribute value.

10. (Original) The method of Claim 8 wherein said attribute data set includes an attribute value.

11. (Original) The method of Claim 1 wherein the markup document is an XML document.

12. (Currently Amended) A method of storing data, from a markup document containing a plurality of elements and a plurality of attributes, in a relational database, said method comprising:

storing an element record for every element of said plurality of elements in an element table of said relational database so that said relational database includes a plurality of element records, wherein each element record includes a unique element ID, and an element data set;

storing an attribute record for every attribute of said plurality of attributes in an attribute table of said relational database so that said relational database includes a plurality of attribute records, wherein said attribute record comprises an attribute data set for one attribute and an element ID of an element to which the one attribute is assigned;

storing, for every unique element name of the plurality of elements, an element name record including an element name and a corresponding unique element name ID in an element name table of said relational database; and

storing, for every unique attribute name of the plurality of attributes, an attribute name record including an attribute name and a corresponding unique attribute name ID in an attribute name table of said relational database wherein a new markup document having a same content as said markup document can be constructed using said plurality of element records and said plurality of attribute records stored in said relational database.

13. (Original) The method of Claim 12 wherein said element data set includes character data.

14. (Original) The method of Claim 12 wherein said element data set contains a parent element ID.

15. (Original) The method of Claim 14 wherein said element data set contains a parent element ID.

16. (Currently Amended) A memory data structure comprising:

an element table wherein said element table is configured to store a plurality of element records corresponding to a plurality of elements of a markup document so that a relational database includes a

plurality of element records, and further wherein each element record includes an assigned element ID field and an element data set field; and

an attribute table wherein said attribute table is configured to store a plurality of attribute records corresponding to a plurality of attributes of said markup document so that said relational database includes a plurality of attribute records, and further wherein each attribute data record includes an element ID field and an attribute data set wherein a new markup document having a same content as said markup document can be constructed using said plurality of element records and said plurality of attribute records stored in said relational database.

17. (Original) The data structure of Claim 16 wherein the element data set includes a character data field.

18. (Original) The data structure of Claim 16 wherein the element data set includes a parent element ID field.

19. (Original) The data structure of Claims 16 wherein the element data set includes an element number field.

20. (Original) The data structure of Claim 17 wherein said element data set includes an element name field.

21. (Original) The data structure of Claims 16 wherein the element data set comprises an element name ID field.

22. (Original) The data structure of Claim 21 further comprising:

an element name table wherein said element name table is configured to store a plurality of element name records, and further wherein each element name record

includes an element name ID field and a corresponding element name field.

23. (Original) The data structure of Claim 16 wherein said attribute data set includes an attribute name and an attribute value.

24. (Original) The data structure of Claim 16 wherein said attribute data set contains an attribute name ID.

25. (Original) The data structure of Claim 24 further comprising:

an attribute name table wherein said attribute name table is configured to store a plurality of attribute name records wherein each attribute name record includes an attribute name ID field and a corresponding attribute name field.

26. (Currently Amended) A computer program product having stored thereon a module for transferring data from a markup document into a relational database wherein execution of said module generates a method comprising:

storing an element record for every element of a plurality of elements of said markup document in an element table of said relational database so that said relational database includes a plurality of element records, wherein each element record includes a unique element ID, and an element data set; and

storing an attribute record for every attribute of a plurality of attributes of said markup document in an attribute table of said relational database so that said relational database includes a plurality of attribute records, wherein said attribute record comprises an attribute data set for one attribute and an element ID of an element to which the one attribute is assigned wherein

a new markup document having a same content as said markup document can be constructed using said plurality of element records and said plurality of attribute records stored in said relational database.

27. (Original) The computer program product of Claim 26 wherein said method further comprises:

 storing, for every unique element name of the plurality of elements, an element name record including an element name and a corresponding unique element name ID in an element name table of said relational database.

28. (Original) The computer program product of Claim 26 wherein said method further comprises:

 storing, for every unique attribute name of the plurality of attributes, an attribute name record including an attribute name and a corresponding unique attribute name ID in an attribute name table of said relational database.

29. (Original) The computer program product of Claim 27 wherein said method further comprises:

 storing, for every unique attribute name of the plurality of attributes, an attribute name record including an attribute name and a corresponding unique attribute name ID in an attribute name table of said relational database.

30. (Currently Amended) A computer system comprising:
 a memory having stored therein a module for
 transferring data from a markup document into a relational
 database;

a processor coupled to said memory wherein execution of said module by said processor generates a method comprising:

storing an element record for every element of a plurality of elements of said markup document in an element table of said relational database so that said relational database includes a plurality of element records, wherein each element record includes a unique element ID, and an element data set; and

storing an attribute record for every attribute of a plurality of attributes of said markup document in an attribute table of said relational database so that said relational database includes a plurality of attribute records, wherein said attribute record comprises an attribute data set for one attribute and an element ID of an element to which the one attribute is assigned wherein a new markup document having a same content as said markup document can be constructed using said plurality of element records and said plurality of attribute records stored in said relational database.

31. (Original) The computer system of Claim 30 wherein said method further comprises:

storing, for every unique element name of the plurality of elements, an element name record including an element name and a corresponding unique element name ID in an element name table of said relational database.

32. (Original) The computer system of Claim 30 wherein said method further comprises:

storing, for every unique attribute name of the plurality of attributes, an attribute name record including an attribute name and a corresponding unique

attribute name ID in an attribute name table of said relational database.

33. (Original) The computer system of Claim 31 wherein said method further comprises:

storing, for every unique attribute name of the plurality of attributes, an attribute name record including an attribute name and a corresponding unique attribute name ID in an attribute name table of said relational database.

Claims 1 to 33 were pending in the application at the time of the advisory action. Claims 1 to 33 remain rejected as anticipated.

Claims 1, 12, 16, 26, and 30 have each been amended to recite characteristics that were inherent in the corresponding original claim. In particular the plurality of different records stored in the two tables represent the content of the XML document. See for example, Specification, Pg. 9, lines 8 to 17. Accordingly, the amendments should not affect the patentability of the claims, when the original claims were interpreted as required by the MPEP.

Claims 1 to 33 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,721,727, hereinafter referred to as Chau. Applicants respectfully traverse the anticipation rejection of Claim 1 in view of Chau.

In the advisory action, it was stated:

An ordinary skill person in the data processing art will understand [Sic] that [Sic] the database could have several tables. The tables [Sic] name need not be the same as claimed. The table contents should have at least similar elements or objects. Plurality of elements are the same as plurality of records in the element table as claimed.

With all due respect, Applicants respectfully point out that the fact that a relational database "could have several tables" is not a sufficient basis for an anticipation rejection. The MPEP requires:

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM

.... "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (Emphasis added)

Thus, the MPEP demonstrates the fact that a relational database could have multiple tables is not relevant unless the reference teaches the identical tables in as complete detail as contained in the claim. The MPEP further defines what is considered identical:

. The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Thus, the MPEP does not say that some tables with plurality of elements can be found but rather the tables "must be arranged as required by the claims." The advisory action is but further evidence that an improper level of analysis has been done for an anticipation rejection.

Claim 1 recites that the content of an XML document is stored in two tables, an element table and an attribute table. Moreover, Claim 1 recites that the element table and the attribute have records with specific features. Therefore, the MPEP requires that Chau show not just some tables with elements in a relational database but rather tables arranged as required by Claim 1.

The rejection has failed to cite any teaching in Chau of two tables arranged as recited in Claim 1 in which the content of an XML document is stored. In fact, as shown in Fig. 3 of Chau, the XML document is stored in a column of a single table. Specifically, Chau taught in the Abstract:

A main table is created in a relational database management system, wherein the main table has a column for storing an extensible markup language (XML) document in a native XML format (Emphasis Added)

Chau explicitly stated how the XML document was stored. In fact, this explicit statement by Chau on how the XML document

is stored teaches away from Applicants' invention as recited in Claim 1, because Chau taught that a single table is used and that the document is stored in "a native XML format."

This explicit teaching is what must be considered and not some general knowledge that relational database contain tables with elements. Chau describes exactly in what and how the XML document is stored. This explicit teaching is repeated in the detailed description of Chau. Chau explicitly taught:

. . . an XML column is used to store entire XML documents . .

Chau, Col. 7, line 66.

The XML System provides several user defined types (UDTs) for XML columns. These data types are used to identify the storage types of XML documents in the application table.

Chau, Col. 8, lines 14 to 17.

Again, Chau is unambiguous as to how the XML document is stored and in what the XML document is stored. Therefore, any other interpretation of Chau, concerning how the XML document is stored, is not supported by Chau and is therefore an inappropriate basis for an anticipation rejection.

Further, as noted in the rejection, the side tables are not tables used to store elements and attributes of the XML document as recited in Claim 1, but rather the side tables are used to store information used in searching the main table according to Chau.

Thus, not only has the rejection failed to cite any teaching of the same invention in the same detail as recited in the Claims, but the information relied upon directly contradicts the conclusions in the rejection. Applicants

respectfully request reconsideration and withdrawal of the anticipation rejection of Claim 1.

Claims 2 to 11 depend from Claim 1 and so distinguish over the prior art for at least the same reasons as Claim 1 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 2 to 11.

Claim 12 recites storing particular information in a particular way in four different tables. The rejection of Claim 12 does not cite any teaching in Chau in the same detail as recited in Claim 12, but instead mixes and matches different parts of the reference. For example, the rejection cited storage techniques as teaching exactly the third element of Claim 12. Applicants respectfully point out that storage techniques suggest or teach nothing about storing information in an element name table according to Claim 12. Further, Claim 12 includes language similar to that discussed above with respect to Claim 1 and so the remarks with respect to Claim 1 are applicable to Claim 12, and are incorporated herein by reference. Applicants request reconsideration and withdrawal of the anticipation rejection of Claim 12.

Claims 13 to 15 depend from Claim 12 and so distinguish over the prior art for at least the same reasons as Claim 12 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 13 to 15.

Each of independent Claims 16, 26, and 30 stand rejected based upon substantially the same rationale as Claim 1. Each of these claims includes language similar to that discussed above with respect to Claim 1 and so the remarks with respect to Claim 1 are applicable for each of these claims and are incorporated herein by reference with respect to each. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 12, 16, 26, and 30.

Claims 17 to 25 depend from Claim 16 and so distinguish over the prior art for at least the same reasons as Claim 16 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 17 to 25.

Claims 27 to 29 depend from Claim 26 and so distinguish over the prior art for at least the same reasons as Claim 26 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 27 to 29.

Claims 31 to 33 depend from Claim 30 and so distinguish over the prior art for at least the same reasons as Claim 30 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 31 to 33.

Claims 1 to 33 remain in the application. Claims 1, 12, 16, 26, and 30 have each been amended. For the foregoing reasons, Applicant(s) respectfully request allowance of all pending claims. If the Examiner has any questions relating to the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicant(s).

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 11, 2005.



Attorney for Applicant(s)

October 11, 2005
Date of Signature

Respectfully submitted,



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